Work Order ID 125259 *125259* Page 1 Tuesday, October 07, 2014 10:39:24 AM D3391-023 Accept. Item ID: *N900040100* Setup Start Revision ID: Stop **Item Name:** Mid Tube Assembly *1* **Start Date:** 9/25/14 Start Oty: 1.00 **Cust Item ID: Required Date: 10/06/14** Reg'd Oty: 1.00 **Customer:** Reference: Run Start Process Plan: ______ Date: 14-10-08 Tooling: **Approvals:** Date: Stop Date: OC: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Tool # Plan Accept Reject Reject Insp. **Work Center ID** Description Code Number Stamp **Run Hours Qty** Oty **Draw Nbr Revision Nbr** D3391 I 100 0.00 Skidtubes *100* Skidtubes 0.00 Memo Skidtubes 1-Cut tube to finish length as per Dwg D3391 2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391 3-Open saddles and GHW holes to Ø0.4375" exept for fwd saddle hole of detail BE14-10-09 4-Remove .030" from Fwd indexing Ridge as per Dwg D3391 5-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391 6-Deburr 7- Locate D3391-021 in D3391-023 at 9.00" (see view z-z) 8- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes üsing DT 8149 locating from previusly drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previusly tranfer drilled pilot holes in D3391-023/-021 using drill press. BE14-10-16 ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as

ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499".

*D3391-021 BATCH: 23670

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Work Order ID	125259
Tuesday, October 07, 201	14 10:39:2

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Tuesday, Octob	er 07, 2014	10:39:24 AM			1/.1.7				
Item ID: Revision ID: Item Name:	D3391-023 Mid Tube As			Accept	*N900	04010	∩* Setu	p Start Stop	*NS1* *NS2*
Start Date:	9/25/14	Start Qty: 1.00	*1*		Cust Item I	D:			
Required Date Reference:	: 10/06/14	Req'd Qty: 1.00	*1*		Customer:				
Approvals:	Process Pl	an:	Date:	Tooling:	Da	te:	Run	Start	*NR1*
	QC:		Date:	_ SPC (Y/N):	Da	ite:		Stop	*NR2*
Sequence ID/ Work Center I	D	paint market ***DO NOT Open wearp (10 holes) as Open wearp (20 holes) as ***DO NOT Deburr and taft end. 10- Locating wearplte hole	pilot holes using wearplate; C DRILL HOLES #3-19-20 late holes of D3391-023 at per Dwg D3391 late holes of D3391-023 at per Dwg D3391 COPEN 2 MOST FWD Wolow out all chips from insurance in D3391-021 using Dispersion D3391-021 using Dispersion D3391	D FROM FWD END OF J ssembly detail section G-0 ssembly detail section H-I EARPLATE HOLES*** side tube, scribe batch # in holes in D3391-023 drill r	IG G to Ø0.250" H to Ø0.297" n D3391-023 at	Tool # Plan Code	Qty (Qty 1	Reject Insp. Number Stamp
*110 *110* QC Quality Control		QC5- Inspect part compl	eteness to step on W/O	0.00			<u> </u>	690	DAS 9 9-89

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4. 0.0304.			-	***************************************		DISPOSITION							
Work Orde	er: _					DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS	
						Rework			Skid-tube	Crosstube		Water Jet	Engineering
Part N	۱o. <u> </u>					Scrap			Machining	Small Fab		d. Eng. Coor.	Quality
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125259 Page 3 Tuesday, October 07, 2014 10:39:24 AM D3391-023 Item ID: Accept *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Mid Tube Assembly *1* **Start Date:** 9/25/14 Start Qty: 1.00 **Cust Item ID:** Required Date: 10/06/14 Req'd Oty: 1.00 **Customer:** Reference: Run Start **Tooling:** Date: **Approvals:** Process Plan: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ **Operation** Set Up/ Tool # Plan Reject Tool ID Accept Reject Insp. **Work Center ID Description Run Hours** Code Qty Qty Number Stamp 120 Chemical Conversion Coat per QSI005 4.1 0.00 *120* 1 gr 14-10-20 HandFinish 0.00 Memo Hand Finishing

130

QC7-Inspect Chemical Conversion Coat

0.00

130

Quality Control

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Memo

0.00

14-10-20

DQA:			Date:			—									
						WORK ORDER NON-	-C(ONFO	RMANCE / UI			_	A E R O S P A C E	=	
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Part N	lo.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
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		Crimp/Kin	k/Ripple,	/Wave		Burrs		Inspecti	ion Incomplete/Un	nqualified	Part Lost/Mi	ssing	Weld		
		Cuffs				Contamination		Instruct	ions Incomplete/L	Jnclear	Part Moved		Wrong Stock Pulled		
		Crushing				Countersink		-	ned/off center		Positioned W	/rong _			
		Heat Trea	t			Cut Too Short		Mislabe	eled		Power Loss/S	Surge	Other		
		Inspection	Strip in	Tube		Drawing		Misread	t						
		Marks/Ch	atter			Drill Holes		Off-set			***************************************				
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Tuesday, Octobe	er 07, 2014	10:39:24 AM											
Item ID: Revision ID:	D3391-023			Accept	*N900	040	100)*	Setup	Start	*N	S1*	
Item Name:	Mid Tube As	ssembly								Stop	*N.	S2*	
Start Date:	9/25/14	Start Qty: 1.00	*1*		Cust Item 1	D:							
Required Date:	10/06/14	Req'd Qty: 1.00	*1*		Customer:								
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	QC:		Date:	SPC (Y/N):	Da	ate:				Stop	*N	R2*	
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		Adhere for 1 A/R Sikafler	in place as per Dwg D339 2 hours) 14-11-2 x exp: 13945	O1 & QSI 015.									
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Tuesday, October 07, 2014 10:39:24 AM

Item ID: Revision ID: Item Name:	D3391-023 Mid Tube Ass	ombly.		Accept	*N900	<u>04010</u>	0 *	Setup Start Stop	10'21
Start Date: Required Date: Reference:	9/25/14	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:		•	*NS2*
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		ate:		Run Start Stop	'NHI'
Sequence ID/ Work Center II 160 *160* Skidtubes Skidtubes 170 *170* QC Quality Control		Operation Description Skidtubes Memo 1-Weld cross 2-grind weld QC10- Inspect visual per Memo		Set Up/ Run Hours 0.00	Tool ID	Tool # Plan Code	Accept Qty	Qty	Reject Insp. Number Stamp BETH TO - 2 DAS 9 9-89
180 *1 AN* QC Quality Control		QC5- Inspect part comple	teness to step on W/O	0.00		·	€	D 1410-	DAS 9 9 9-89

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						Rework			Skid-tube	Crosstube		Water Jet		Engineering
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	Crir	np/Kinl	k/Ripple	/Wave		Burrs		Inspecti	on Incomplete/Un	qualified	Part Lost/Mi	ssing		Weld
	Cuf	fs				Contamination			ions Incomplete/U	nclear	Part Moved			Wrong Stock Pulled
	Cru	shing				Countersink		Misalig	ned/off center		Positioned V	Vrong		
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	Marks/Chatter Drill Holes					Drill Holes		Off-set						
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Tuesday, October 07, 2014 10:39:24 AM D3391-023 Accept Item ID: *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Mid Tube Assembly *1* **Start Date:** 9/25/14 Start Qty: 1.00 **Cust Item ID:** Reg'd Qty: 1.00 Required Date: 10/06/14 *1* **Customer:** Reference: Run Date:_____ Tooling: Approvals: Process Plan: Date: Stop Date: _____ **SPC** (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Insp. Accept Reject **Work Center ID Description** Qty Qty Code Number **Run Hours** Stamp 185 Pressure Wash per QSI005 4.3 0.00 *125* HandFinish 0.00 AND REALODINE AS PER PAR09-043 Hand Finishing 1 6 M-10-30 \$5.8 190 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00 *100* Powdercoat 0.00 Powder Coating FINISH TIME: 200 QC3- Inspect Part Finish 0.00 0.00 Memo Quality Control

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Work Ord Tuesday, Octobe				*125	5259*							Page 7
Item ID: Revision ID: Item Name:	D3391-023 Mid Tube Asse	embly		Accept	*N900	040	100)*	Setup	Start Stop	171	S1* S2*
Start Date: Required Date: Reference:	9/25/14 10/06/14	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	ID:						
Approvals:	Process Plan	1:	Date:	Tooling:	Da	ate:	-		Run	Start	*N	R1*
Q	QC:		Date:	_ SPC (Y/N):	D:				Stop	*NI	R2*	
Sequence ID/ Work Center II		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Rej Qty		Reject Number	Insp. Stamp
* ?? A ^ * HandFinish Hand Finishing		HandFinishing Memo 1-Install Inse	erts as per Dwg	0.00					-4	JL)		403
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Quality Control

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						WORK ORDER NON-	-C(ONFO	RMANCE / UF	PDATE				AEROSPACE		
QA Closed:			Date:							V	ork Order up	date only				
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						Rework			Skid-tube	Crosstube	Water Jet Engineering					
Part f	١o.					Scrap			Machining	Small Fab	Prod. Eng. Coor. Quality					
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			L				FAI	ULT CAT	TEGORY							
Landii	ng G	ear				General										
		Bending				Bend		Folio/P	rogram		Outside Dim	ensions		Pressure/Forced		
		Centre No	ot Concen	itric		BOM/Route		Grain		 	Over/Under	tolerance		Set-up		
		Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorred	:t	<u> </u>	Temperature/Cure		
		Crimp/Kir	nk/Ripple,	/Wave		Burrs		Inspecti	on Incomplete/Und	qualified	Part Lost/Mi	ssing	\Box	Weld		
	Cuffs					Contamination		Instruct	ions Incomplete/Ui	nclear	Part Moved		i	Wrong Stock Pulled		
		Crushing				Countersink		Misalig	ned/off center		Positioned W	/rong				
	Heat Treat					Cut Too Short	_	Mislabe			Power Loss/S	Surge	(Other		
	Inspection Strip in Tube					Drawing		Misread	i							
	_	Marks/Ch				Drill Holes		Off-set								
		Turning S				Finish		l	Calibration							
	Wave/Twist in Tube					Fit/Function		Out of S	Sequence							

Work Ord Tuesday, Octobe				*125					Page 8			
Item ID: Revision ID: Item Name:	D3391-023			Accept	*N900	<u>040</u>	100)*	Setup	Start Stop		S1* S2*
Start Date: Required Date: Reference:	9/25/14 10/06/14	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:						
Approvals:	Process P QC:	lan:	Date:	Tooling: SPC (Y/N):	Date: Date:]	Run	Start Stop		R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rejo Qty		Reject Iumber	Insp. Stamp

0.00

0.00

QC21- Final Inspection - Work Order Release

Memo

260

Quality Control

DQA:			Date:			WORK OBDED NON	DART						
QA Closed:			Date:			WORK ORDER NON	AEROSPACE						
Mad. Ordon						DISPOSITION							
Work Orde	er: 🗕					2	,			6 t [7	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Dawk N	ما.					Rework			Skid-tube	Crosstube	- Dua	Water Jet	Engineering
Part No.						Scrap		B	Machining	Small Fab	 	d. Eng. Coor.	Quality Other
NCR N	No.					Use-as-is		men	noforming	Finishing	- Rec/stol	re/Packaging	
NCK I	NO. —					Suspected Unapproved	!		Large Fab	Composite		Supplier	
Root					Desci	ription of work order update		Initial	А	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Des	cription	Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling												:	
Handling/Pre													
Material													
Operator													·
Offset/Setup													
Process													, · · · · ·
Supplier													
Training													• *
Transport		1											, ,
Unapproved													
		•					FAI	ULT CAT	regory				
Landi	ng Ge	ar				General		_			<u> </u>		
	В	ending				Bend		Folio/F	rogram		Outside Dim	ensions	Pressure/Forced
		entre No	t Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
		racks				Broken/Damage/Defect		Hardwa	re		Part Incorred	et .	Temperature/Cure
		rimp/Kin	k/Ripple,	/Wave		Burrs		Inspect	ion Incomplete/l	Unqualified	Part Lost/Mi	ssing	Weld
		uffs				Contamination		Instruct	ions Incomplete	/Unclear	Part Moved		Wrong Stock Pulled
	Crushing					Countersink		Misalig	ned/off center	•	Positioned V		
	Heat Treat				Cut Too Short		Mislabe	led		Power Loss/	Surge	Other	
	lr	spection	Strip in	Tube		Drawing		Misread	1		_	_	
·	\	1arks/Ch	atter			Drill Holes		Off-set					
	Т	urning Se	equence			Finish		Out of (Calibration				-
	Πv	Vave/Twi	st in Tub	e		Fit/Function		Out of S	Sequence				

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Picklist Print

Tuesday, October 07, 2014 10:39:24 AM

Work Order ID: 125259

125259

Parent Item:

D3391-023

D3391-023

Parent Item Name:

Mid Tube Assembly

Start Date: 9/25/14

Required Date: 10/06/14

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP A05.10.20New Issue

KJ/EC

IPP B06.02.10ECN773 dwg rev.D EC

07.03.20 rev F dwg

IPP C IPP D 07.03.28 re-format

EC EC

EC

IPP E 07.10.31 ecn 1053P

IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC

IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC

IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100		Manufactured	No			100	Each	57.0000	1	1			4.4
D2500-1-	100								**		BEI	4-10	-09
				Location		Loc	Oty	Loc Code					
				HALL (82373 86065		57 8 49			/	<u>-</u>		
D3389-1		Manufactured	No		80003	140	Each	6.0000	1	1	_		*
D3389-1	•								**		BE	14-10-2	20
				Location		Loc	<u>Oty</u>	Loc Code					
				LG (115652		6 6		* <u> </u>	1	_		

DQA:			Date:			WORK ORDER NON	DART								
QA Closed:			Date:			WORK ORDER NON	AEROSPACE								
					:	Work Order updat DISPOSITION AGAINST DEPARTMENT/PR									
Work Orde	er:					DISPOSITION			AGAINS		-	PROCESS			
						Rework		Skid-tube Crosstube		•		Water Jet		Engineering	
Part N	10					Scrap			Machining	Small Fab	╙	Prod. Eng. Coor.			Quality
						Use-as-is		Thern	noforming	Finishing	-	Rec/Store/Packaging			Other
NCR No.						Suspected Unapproved]		Large Fab	Composite	:		Supplier	L	
Root					Desci	ription of work order update	1	nitial	A	ction	,	Sign &			
Cause	Date Step Qty			Qty		or non-conformance	Ch	ief Eng	Des	cription		Date	Verificatio	n	QC Inspector
Design															
Doc/Data															
Equip/Tooling															
Handling/Pre															
Material													•		
Operator		İ													
Offset/Setup							İ								2. The state of th
Process															
Supplier]								
Training															
Transport															
Unapproved							<u> </u>								l
							FAI	JLT CA1	EGORY			·			
Landir	ng Gear					General						٦		_	1
	Bend	_			<u> </u>	Bend	<u> </u>		rogram		_	Outside Dim		<u> </u>	Pressure/Forced
}	─ ┤		t Concen	itric		BOM/Route	<u> </u>	Grain			_	Over/Under		<u> </u>	Set-up
-	Cracl					Broken/Damage/Defect		Hardwa			<u></u>	Part Incorred		\vdash	Temperature/Cure
-		•	<td>/Wave</td> <td></td> <td>Burrs</td> <td><u></u></td> <td></td> <td>on Incomplete/L</td> <td></td> <td><u> </u></td> <td>Part Lost/Mi</td> <td>ssing</td> <td>\vdash</td> <td>Weld</td>	/Wave		Burrs	<u></u>		on Incomplete/L		<u> </u>	Part Lost/Mi	ssing	\vdash	Weld
}	Cuffs					Contamination		i	ions Incomplete		_	Part Moved		<u></u>	Wrong Stock Pulled
}	Crushing					Countersink	\vdash	-	ned/off center	•		Positioned W	_	_	1
}	Heat Treat Inspection Strip in Tube					Cut Too Short	<u> </u>	Mislabe			L	Power Loss/S	Surge	L	Other
	─			Tube		Drawing	\vdash	Misread	I						
-	Marks/Chatter Turning Sequence					Drill Holes	ļ	Off-set					····		
}	 -	-	quence st in Tub			Finish Fit/Function			Calibration						
1	10040	⊢/ I \Λ/}\		₽		1611/6111K 1KHH		CHIEDT \	anianco						

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Tuesday, October 07, 2014 10:39:24 AM

Work Order ID: 125259

125259

Parent Item:

D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 9/25/14

Required Date: 10/06/14

BF14-10-21

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured

160

Each

83.0000

D3681-1 **

Location	Loc	Oty	Loc Code		
LG		80			
123088		40			
(128490)		40			_5'
LG001		3			
114884		3			
	220	т .	2 (02 000	20	

ALS4-1032-130

AELS4-1032-130 Purchased

No

230 Each

3,693.000

AI \$4-1032-130

Rivnut

Location	Loc Oty	Loc Code	
ST267	3693		
M126109	57		
M128211	48		
M128649	3588		X20

DQA:			Date:			WORK OBDER NON	DART									
QA Closed:			Date:			WORK ORDER NON	WORK ORDER NON-CONFORMANCE / UPDATE Work Order update only									
Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS				
Part I						Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root					Desc	ription of work order update		Initial	Ac	tion	Sign &					
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector			
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved																
							FA	ULT CAT	TEGORY							
Landi		Gear Bending Centre No	ot Concen	ntric		General Bend BOM/Route		Folio/P Grain	Program		Outside Dim Over/Under	}	Pressure/Forced Set-up			
		Cracks Crimp/Kir Cuffs Crushing Heat Trea		/Wave		Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short	rrs Intamination Intersink			nqualified	Part Incorred Part Lost/Mi Part Moved Positioned W Power Loss/S	ssing Vrong	Temperature/Cure Weld Wrong Stock Pulled Other			
		Inspection Strip in Tube Marks/Chatter				Drawing Drill Holes		Mislabe Misread Off-set								
:		Turning So Wave/Tw		e	-	Finish Fit/Function		4	Calibration Sequence							



